

Supplemental Table 1: University of Michigan cGVHD characteristics

Supplemental Table 2: 130 analytes assessed by Quantibody™ Array

Supplemental Table 3: CXCL9 Sensitivity and Specificity for the diagnosis of cGVHD in the University of Michigan (UM) and Fred Hutchinson Cancer Research Center (FHCRC) validation cohorts

Supplemental Figure 1: Receiver operating characteristic (ROC) Curves for the University of Michigan Validation Set. (A) ROC curves for the five individual biomarkers at the onset of *de novo* cGVHD (n=45) and time-matched no cGVHD (n=64). CD13 (dotted line): AUC = 0.62); IL2R α (short dash - -): AUC 0.65; BAFF (dash dot - · -): AUC 0.65); Elafin (long dash - - -): AUC 0.67; CXCL9 (solid black —): AUC 0.83. (B) ROC curves for a 4 protein composite that excludes CXCL9 (black dot): AUC 0.74; 5 protein composite (thick black —): AUC 0.83; CXCL9 (thin black —): AUC 0.83.

Supplemental Table 1: University of Michigan Chronic Graft-vs.-Host Disease (cGVHD) Characteristics

Characteristic	Discovery Cohort N=17	UM Validation Cohort N=45	P value for difference between Discovery and Validation					
Time to cGVHD diagnosis, days								
Median	129	136	0.52					
Range	97–230	53–336						
Time to sample acquisition from diagnosis, days								
Median	0	0	0.45					
Range	-50 to +12	-42 to +35						
NIH Global Severity at Onset								
Mild	–	4 (9%)	0.04					
Moderate	6 (35%)	25 (56%)						
Severe	11 (59%)	16 (35%)						
Onset Organ Involvement	NIH Severity							
	n	1	2	3	n	1	2	3
Skin	9	5	3	1	17	10	4	3
Mouth	14	9	5	0	36	26	9	1
Eyes	7	5	1	1	11	9	2	0
GI	3	3	0	0	11	7	3	1
Liver	13	2	4	7	30	6	12	12
Lung	7	5	0	2	6	5	1	0
Joints	2	2	0	0	2	2	0	0
GU	0	0	0	0	4	2	2	0

Abbreviations: NIH, National Institutes of Health

Supplemental Table 2: Panel of 130 Biomarkers Tested by Quantibody™ Array

sBAFF	IL-10	MIF	VEGF-D	IGFBP-2
B2M	IL-12p70	CXCL9	BLC	IGFBP-3
CA15-3/EMA/MUC1	IL-13	CCL3	Eotaxin-1	IGFBP-4
CEACAM	IL-15	CCL4	Eotaxin-2	IGFBP-6
E-cadherin	IL-16	CCL15	Eotaxin-3	IGF-1
EpCAM	IL-17	CCL20	IL-2	Insulin
Fas	IL-17F	CCL19	IL-11	NGFR
GITR	IL-18BP _a	CCL23	IL-12p40	NT-3
IL-2R α	IL-1 α	NAP-2	TIMP-2	NT-4
LAP/TGF β 1	IL-1 β	CCL18	AR	OPG
Trappin-2/Elafin	IL-6sR	PDGF-AA	BDNF	PIGF
CCL21	IL-7	PDGF-BB	bFGF	SCF
CCL28	IL-8	PF4	BMP-4	SCFR
CXCL16	IL-9	RANTES	BMP-5	VEGF
GCSF	IL-10	DSF-1	BMP-7	VEGFR2
GM-CSF	CXCL10	CCL17	β -NGF	VEGFR3
GRO	LIP	CCL25	EGF	BTC
HCC-1	LIGHT	TGF α	EGF-R	CTACK
HCC-4	Lymphotactin	TGF β 1	EG-VEGF	ENA-78
HGF	MCP-1	TGF β 3	FGF-4	Eotaxin-3
CCL1	MCP-2	TIMP-1	FGF-7	GCP-2
ICAM-1	MCP-3	TNFR1	GDF-15	IL-28 α
IFN γ	MCP-4	TNFR2	GDNF	IL-29
IL-4	MCSF	TNF- α	GH	IL-30
IL-5	MCSFR	TNF- β	HB-EGF	MSP _a
IL-6	CCL22	TSLP	IGFBP-1	OPN

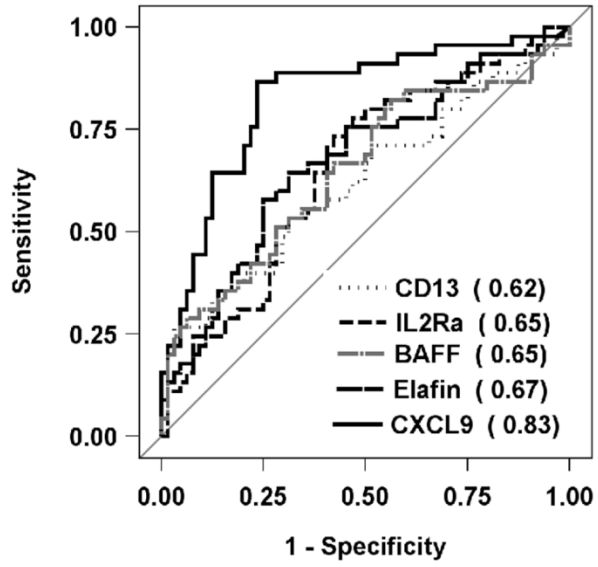
Supplemental Figure 3: **CXCL9 Sensitivity and Specificity for the diagnosis of cGVHD in the University of Michigan (UM) and Fred Hutchinson Cancer Research Center (FHCRC) validation cohorts**

	CXCL9 Threshold (pg/ml)		Sensitivity % (95% CI)		Specificity % (95% CI)	
	UM Validation	FHCRC Newly Diagnosed	UM Validation	FHCRC Newly Diagnosed	UM Validation	FHCRC Newly Diagnosed
25 th percentile	2.5	15	93 (82–99)	76 (65–84)	41 (29–54)	36 (20–54)
Median	6.5	26	87 (73–95)	59 (48–70)	77 (64–86)	70 (51–84)
75 th percentile	15.6	54.5	44 (30–60)	41 (30–51)	89 (79–95)	90 (76–98)

Abbreviations: cGVHD, chronic graft-vs.-host disease; CXCL9, chemokine (C-X-C motif) ligand 9; CI, confidence interval

Supplemental Figure 1:

A



B

